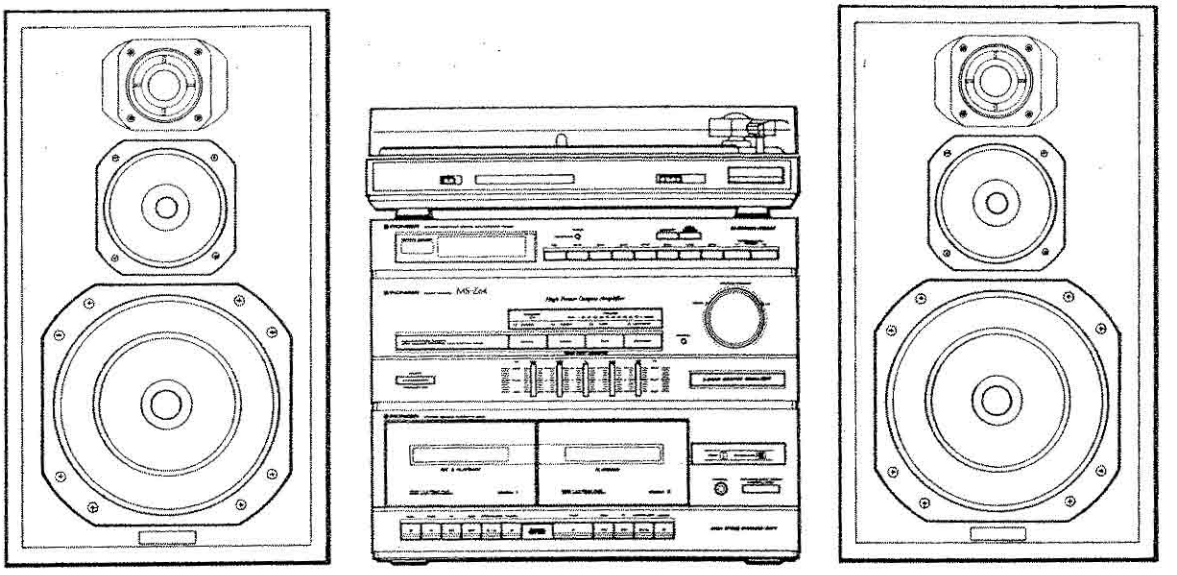
Operating Instructions

MUSIC SYSTEM

MS-Z64

OPTIONAL STEREO TURNTABLE

PL-Z94



Thank you for buying this PIONEER product.
Please read through these operating instructions so you will know how to operate your model properly. After you have finished reading the instructions, put them away in a safe place for future reference.
In some countries or regions, the shape of the power plug and power outlet may sometimes differ from that shown in the explanatory drawings. However, the method of connecting and operating the unit is the same.

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The Art of Entertainment

IMPORTANT

The lightning flash with arrowhead, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

CAUTION:
TO PREVENT THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

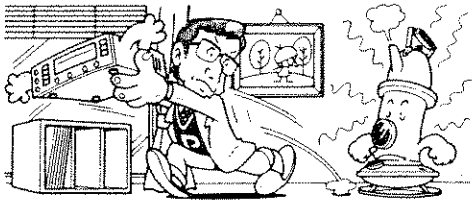
The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

LOCATION

Install the MUSIC SYSTEM in a well ventilated location where it will not be exposed to high temperture or humidity.

Do not install the MUSIC SYSTEM tuner in a location which is exposed to direct rays of the sun, or near to hot appliances or radiators. Excessive heat can adversely affect the cabinet and internal components. Installation of the MUSIC SYSTEM in a damp or dusty environment may result in malfunction or accident. (Also avoid installtion near cookers etc., where the MUSIC SYSTEM may be exposed to smoke from oil, steam or heat.)



FEATURES

- High power output
- 5-band graphic equalizer
- Remote control
- Stereo double cassette tape deck
- Synchronized copy start
- High-speed copy
- Relay play
- Auto recording level
- DIGITAL synthesizer FM/AM tuner
- Up to 24 stations preset (FM-16/AM-8 stations)

BEFORE OPERATING, CHECK THE POSITION OF THE SWITCHES

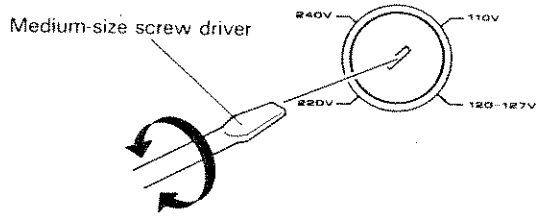
LINE VOLTAGE SELECTOR SWITCHES

Only multi-voltage models are provided with this switch. U.S., Canadian, European, and U.K.models are not provided with this switch.

Main voltages in Saudi Arabia are 127 V and 220 V only. Never use this model with 110 V setting in Saudi Arabia.

The line voltage selector switch is on the rear panel. Before your model is shipped from the factory, this switch is set to the power requirements of the destination. Check that it is set properly before plugging the power cord into the AC wall socket. If the voltage is not properly set or if you move to an area where the voltage requirements differ, adjust the selector switch as follows.

1. Disconnect the power cord.
2. Use a medium-size screwdriver.
3. Insert the screwdriver into the groove on the voltage selector, and adjust so that the tip of the arrow points to the voltage value of your area.



AM/FM CHANNEL STEP SWITCH

This switch is not provided on models for Europe, U.K., North America or Saudi Arabia.

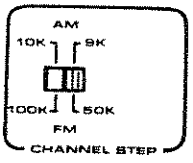
The CHANNEL STEP switch is located on the rear panel. Before the MUSIC SYSTEM leaves the factory, this switch is set to the channel allotment plan of the area in which the MUSIC SYSTEM is sold. When the AUTO TUNING switch is given a single push, the frequency display will change in the following manner.

(100 kHz/10 kHz) position:
Set to this position for areas with FM reception step of 100 kHz and AM 10 kHz.

(50 kHz/9 kHz) position:
Set to this position for areas with FM reception step of 50 kHz and AM 9 kHz.

NOTE:
If the switch is set to the wrong position, correct tuning will not be possible.

Consult your dealer if you are not sure about the channel allotment plan in your area.



CHECKING ACCESSORY ITEMS

Remote control unit

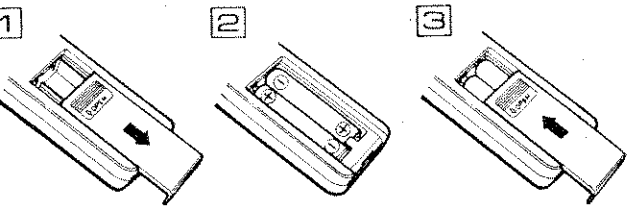
Size "AAA" (IEC R03/UM-4) 1.5 V dry cell batteries

FM T-type antenna

SW lead wire antenna

BEFORE OPERATION

REMOTE CONTROL UNIT



1. Remove the cover of the battery compartment on the reverse side of the remote control unit.
2. Take out the two size "AAA" [IEC R03 (UM-4)] dry cell batteries supplied and load them into the battery compartment, taking care to follow the polarity markings on the compartment.
3. Replace the cover of the battery compartment.

Cautions for handling dry cell batteries

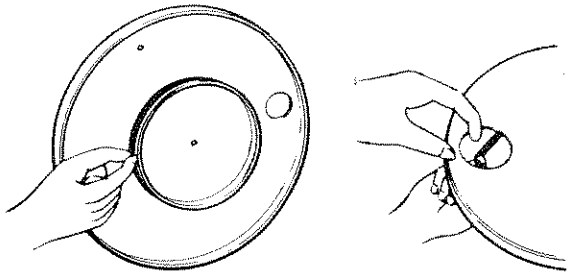
Misusing dry cell batteries can result in electrolyte leakage or explosions. Bear in mind the following points for getting the most out of your batteries.

- When loading the batteries into the battery compartment, make sure the plus ⊕ and minus ⊖ polarities correspond to the markings on the compartment.
- Even though they may be the same shape, batteries come with different voltage ratings. Do not mix or use different voltage ratings.
- Do not mix or use different types of batteries together. Use only the same kind of batteries.
- Do not mix up new batteries and used batteries but replace all the batteries at the same time.

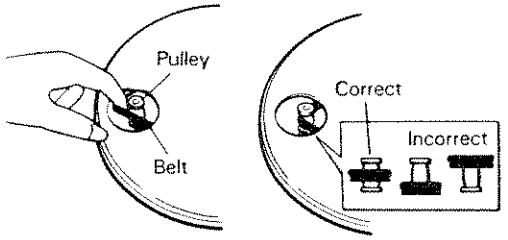
SET-UP FOR OPTIONAL PL-Z94 TURNTABLE

1. Check the parts.

2. Pinch belt on inner rim between thumb and forefinger.



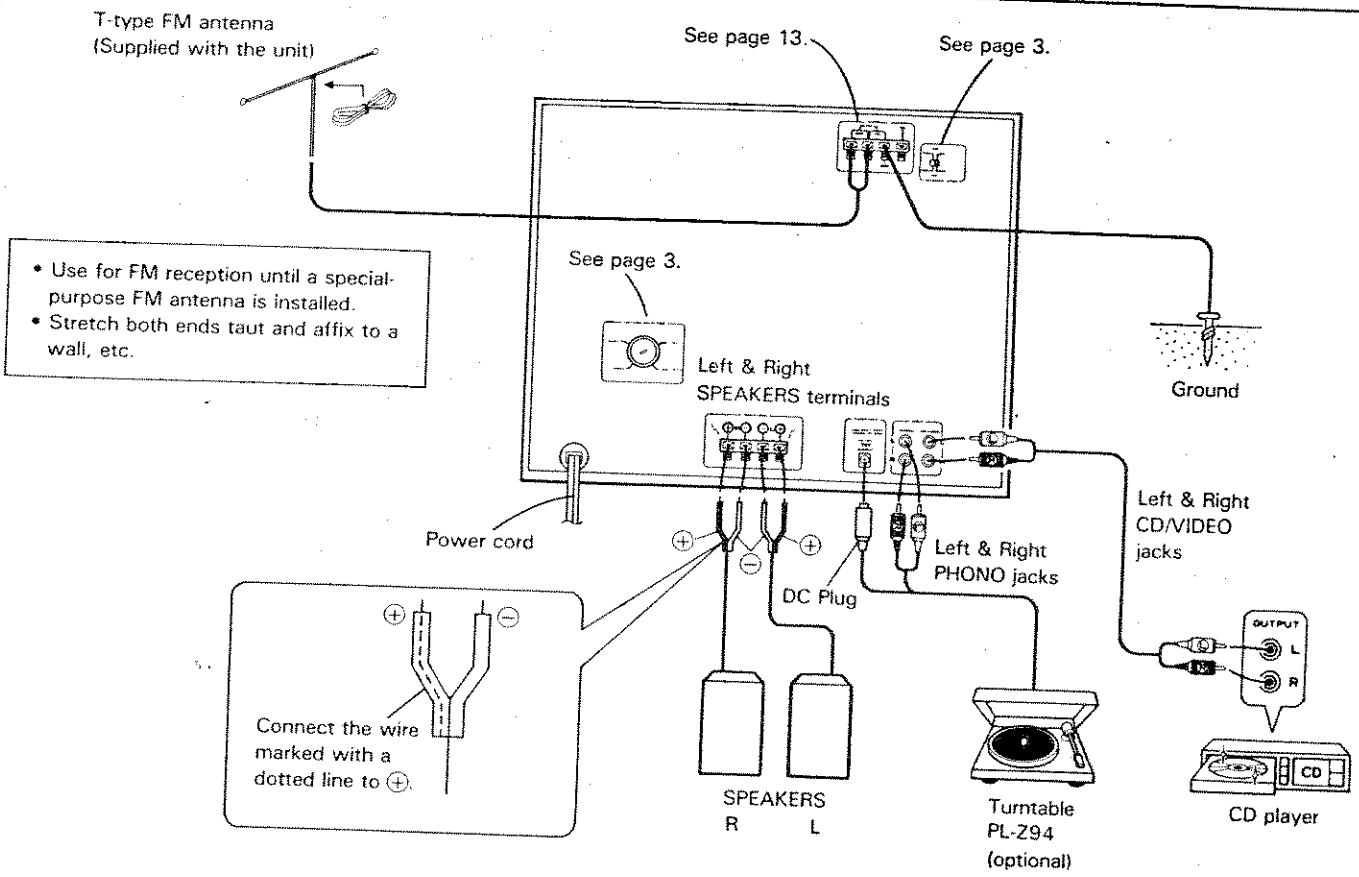
3. Slip belt over thumb and pull out, inserting thumb in hole.
4. Insert forefinger from top of platter and transfer belt to forefinger.
5. Lower platter onto spindle.
6. Release belt onto pulley.



7. Place the platter mat on the platter.
8. Remove the vinyl band holding the tonearm.
9. Remove the tonearm from the arm rest.

10. Remove the stylus cover.

CONNECTIONS



Antenna ground

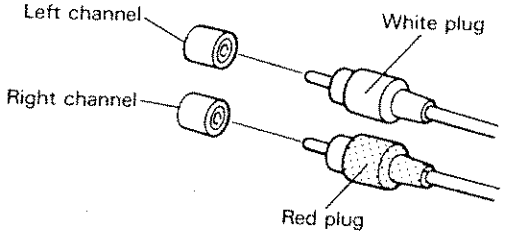
Although grounding is not necessary for reception it is recommended for protection against damage from lightning if an outdoor FM antenna is used. Grounding is recommended as well to help reduce noise and hum.

NOTE:
Never make the ground connection to a gas pipe as sparks could cause the gas to ignite.

Speaker Impedance

Use speaker systems with an impedance ranging from 4 Ω.

Connecting the input cords

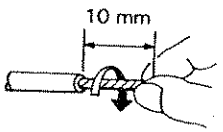


When another stereo component (purchased separately) is connected, note the following instructions:

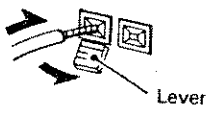
- Connect the plugs properly. Faulty connections can cause noise and also breakdowns and failures.
- The white terminal is for the left channel and the red terminal is for the right channel.

CONNECTING SPEAKER WIRES

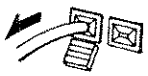
1. Twist the tip of the wire.



2. Push the lever and insert the cord into the opening.

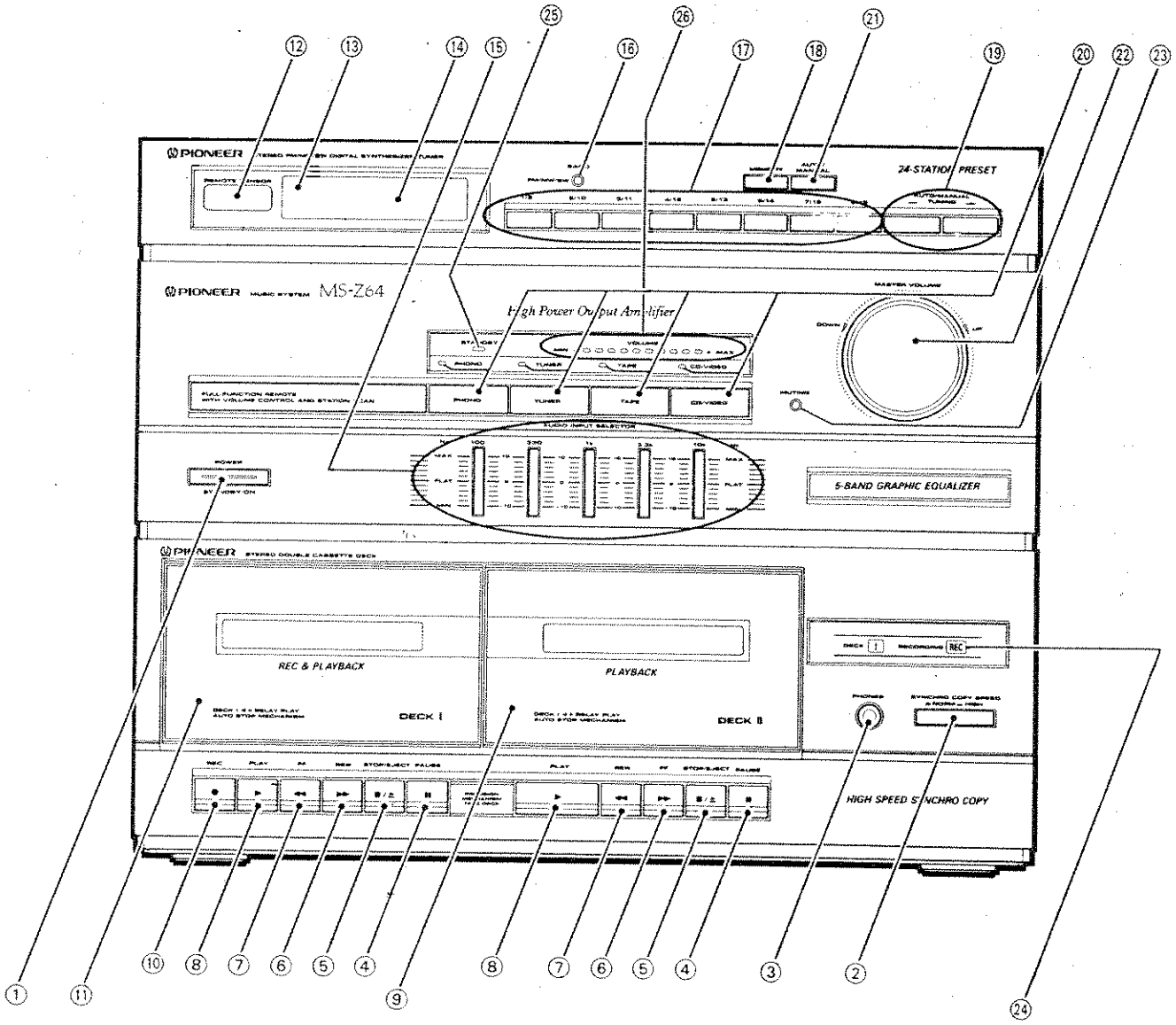


3. Release the lever and pull the cord to see that it is connected properly and securely.



NOTE:
Do not allow any of the cord conductors to protrude from the terminals or touch any other conductors. Malfunctioning or break-downs may occur when conductors come into contact with each other.

FRONT PANEL FACILITIES



Cassette tape deck receiver

① POWER (STANDBY/ON) switch

ON: When set to the ON position, power is supplied and the unit becomes operational.

STANDBY: When set to the STANDBY position, the main power flow is cut and the unit is no longer fully operational. A minute flow of power feeds the unit to maintain operation readiness.

- When not using the unit for a long period, disconnected the power cord.

NOTE:

- *When the power cord is connected to a wall outlet, the unit is in STANDBY condition.*

② SYNCHRO COPY SPEED switch

■ NORM (Normal):

Normal-speed copying (Permits you to listen to playback normally).

▬ HIGH:

High-speed copying (double-speed, halftime copying).

③ PHONES jack

This is "standard plug-type jack" for headphones.

NOTE:

Sound is not heard from the speakers when headphones are in use.

④ PAUSE (▮▮) button
Temporarily stops tape travel. Cancels pause mode when pressed again.

⑤ STOP/EJECT (■/⏏) button
Stops tape travel. Ejects cassette if pressed when tape is stopped.

⑥ FF (►►) button
Fast forward.

⑦ REW (◄◄) button
Rewind.

⑧ PLAY (►) button
Playback.

⑨ DECK II compartment

⑩ REC (●) button
Record.

⑪ DECK I compartment

⑫ REMOTE SENSOR window

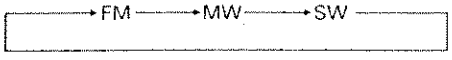
⑬ INDICATORS
FM AUTO:
This lights during FM reception.
FM:
Lights when the Band switch ⑯ is pressed to select FM.
AM:
Lights when the Band switch ⑯ is pressed to select AM (MW, SW).
AUTO TUNING:
This lights if you select AUTO with the AUTO/MANUAL tuning switch ㉑.
MEMORY:
Lights when the MEMORY switch ⑱ is pressed.
STEREO:
Lights when a stereo FM broadcast is received.

⑭ FREQUENCY (PRESET NUMBER) display

⑮ Graphic equalizer controls
The equalizer is divided into five frequency ranges (100 Hz, 330 Hz, 1 kHz, 3.3 kHz, 10 kHz) to adjust music to the individual taste of the listener.

NOTE:
Effective only for audio playback. Does not work for recording and copying operations.

⑯ Band selector switch (FM/MW/SW)
This is used to select the band of the desired station.



The bands change alternately each time the switch is pressed.

⑰ STATION PRESET switches
These are used to recall preset broadcasting stations and to preset the station.

⑱ MEMORY switch
This switch is used to preset stations. When the switch is pressed, the MEMORY indicator will light. To preset the frequency of any station, press the STATION PRESET switches while the memory indicator is lighting.

⑲ TUNING switches
These are used to locate the stations.
Push the "–" switch to go to a lower, and the "+" switch to go to a higher frequency.

⑳ FUNCTION switches/indicators
The indicator ㉖ flashes. The sound volume will be faint.
TAPE:
Press when listening to a cassette tape.
PHONO:
Press when playing records on turntable connected to the PHONO jacks.
TUNER:
Press when listening to FM, MW or SW broadcasts.
CD/VIDEO:
Press when listening to a CD player or VCR connected to the CD/VIDEO jacks.

㉑ AUTO/MANUAL tuning switch/indicator
Use to select either the AUTO mode or MANUAL mode for FM/AM reception. (When the auto tuning mode is selected, the AUTO TUNING indicator will now light.)

㉒ MASTER VOLUME control
Use to adjust sound volume.
This is an electronic volume control, DO NOT FORCE TO OVERTURN OR DAMAGE MAY RESULT.
Adjustment can also be performed with the accessory remote control unit.

㉓ MUTING switch/indicator
Use to temporarily cut sound volume.
ON:
The indicator ㉖ flashes. The sound volume will be faint.
OFF:
The indicator ㉖ stops flashing. The sound will return to its previous volume.

NOTE:
If muting is on, it will be canceled if FUNCTION is switched or volume is adjusted.

㉔ DECK I RECORDING ON indicator (REC)
Lights during recording.

㉕ STANDBY indicator
This indicator lights in standby status when the power cord is connected to a power outlet.

㉖ Power level/Muting indicators
These light successively to show power level. During muting, they flash.

Turntable: PL-Z94 (Optional)

① Platter mat

② Platter spindle

③ EP adaptor

④ Dust cover

⑤ SPEED switch

Set this switch in accordance with the speed of the record.

33:

For 33-1/3 rpm records.

45:

For 45 rpm records.

NOTE:

Be sure to press the switch firmly when starting playback; if not pressed firmly, the platter may rotate without the tonearm moving.

⑥ ARM-ELEVATION switch

- Use the switch for manual play.
- Use the switch to suspend record play temporarily.
- Use the switch when changing the tracks during actual play.

UP:

The tonearm rises (the stylus moves away from the record).

DOWN:

The tonearm descends (the stylus is lowered onto the record).

⑦ STOP switch

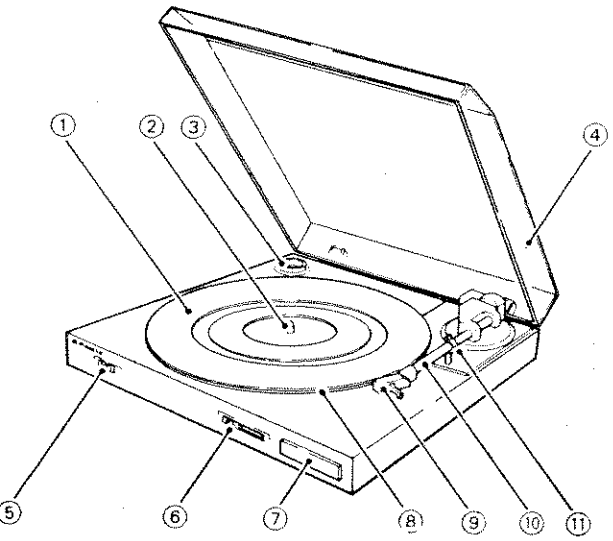
Press this switch when stopping play.

⑧ Platter

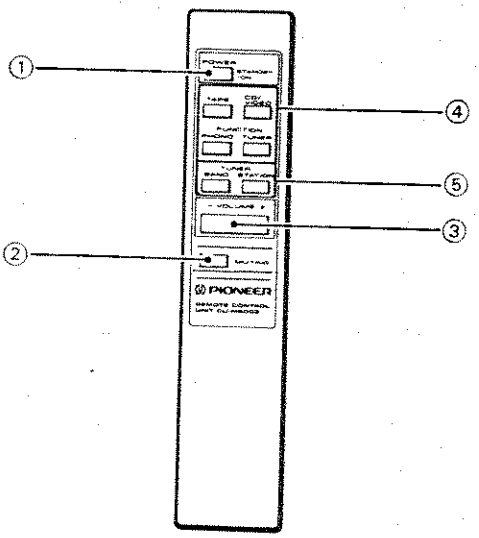
⑨ Cartridge

⑩ Tonearm

⑪ Arm rest



Remote control unit



① POWER (STANDBY/ON) key

② MUTING key

Use to temporarily cut sound volume.

To return to the set volume level press this key again or operate the MASTER VOLUME key.

③ MASTER VOLUME (+: UP, –: DOWN) key

④ FUNCTION selector keys

⑤ TUNER keys

BAND selector keys:

This is used to select the band of the desired station.

STATION key:

Each time this key is pressed the next preset station is called in numerical order.

Range of remote control

When the remote control unit is pointed at the REMOTE SENSOR window on the deck receiver and any of its keys is pressed, the cassette deck receiver and other components can be operated by remote control.

Distance:

Within a range of approximately 7 meters from the REMOTE SENSOR window.

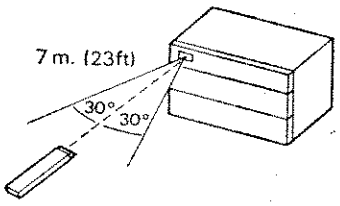
Angle:

Within approximately 30 degrees from the center of the REMOTE SENSOR window.

Remote control will not be possible if there is an obstacle between the remote control unit and the REMOTE SENSOR window.

NOTE:

Remote control may not function if direct sunlight or strong fluorescent light strikes the remote sensor window.



GRAPHIC EQUALIZER CONTROLS

The advantage of the GRAPHIC EQUALIZER over conventional tone controls is that with the five controls of the GRAPHIC EQUALIZER it is possible to control five different frequency band. With conventional tone controls a setting for a bass or treble boost or cur will also affect the lower or upper mid frequencies. The frequency bands controlled by the five slide controls have been chosen to yield the maximum possible control action within the audio spectrum.

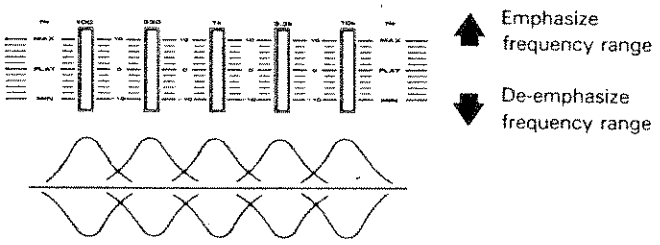
100 Hz:
The 100 Hz control is very useful for enhancing low bass notes as in organ music.

330 Hz:
The 330 Hz control will allow you to vary the upper bass frequencies.

1 kHz:
The 1 kHz control is the presence control and can be used very effectively to emphasize, or de-emphasize vocalists.

3.3 kHz:
The 3.3 kHz control will add brilliance and clarity to brass instruments and violins.

10 kHz:
The 10 kHz control can be used to make up for missing high frequencies absorbed by the environment and to add a natural crispness to music.



OPERATIONS

Switch numbers used in the following explanation refer to the numbers appearing in the FRONT PANEL FACILITIES section on page 6, 7 and 8.

PERFORM THE FOLLOWING PROCEDURES BEFORE STARTING ANY OF THE OPERATIONS.

Select the FUNCTION switches ⑳ or Band selector switch ⑯ before operating any of the equipment.

- To listen to a compact disc or VCR: [CD/VIDEO]
- To listen to a record: [PHONO]
- To listen to cassette tape: [TAPE]
- To listen to FM: [TUNER and then BAND switch]
- To listen to MW: [TUNER and then BAND switch]
- To listen to SW: [TUNER and then BAND switch]

When a function key is pressed, the corresponding indicator lights.

RECORD PLAY (Turntable PL-Z94)

1. **Set the FUNCTION switch ⑳ on the MUSIC SYSTEM to PHONO.**
2. **Place the record on the platter mat.**
3. **Remove the stylus cover and release the tonearm from the armrest.**
4. **Set the SPEED switch ⑤.**
5. **Move the ARM-ELEVATION switch ⑥ to the UP position.**
6. **Move the tonearm by hand across the record.**
   At this stage, the platter starts to rotate.
7. **Move the ARM-ELEVATION switch ⑥ to the DOWN position.**
8. **Adjust the volume with the MASTER VOLUME control ㉒ on the MUSIC SYSTEM and the tone with the Graphic equalizer controls ⑮.**
9. **To stop the player while a record is being played, press the STOP switch ⑦.**

Listening to FM or AM broadcasts

< Auto tuning can be used for both FM and AM (MW) reception. >

1. **Use the AUTO/MANUAL switch ㉑ to select the auto tuning mode or the manual tuning mode.**
   - When the auto tuning mode is selected, the AUTO TUNING indicator will now light.
2. **Use the BAND selector switch ⑯ to select either the FM or AM (MW or SW) reception band.**
   - For FM broadcasts, the "FM" and "MHz" indicators will light.
   - For AM broadcasts, the "AM" and "kHz" indicators will light.
3. **Press the – (Down) or the + (Up) TUNING switches ⑲.**

   Auto tuning [FM, AM (MW, SW)]:
   The tuner will automatically search for a broadcasting station, and stop when one is found. To search for another station, press again.

   Manual tuning [FM, AM (MW, SW)]:
   The tuning frequency will change by one step each time the switch is pressed. Press as many times as necessary to tune in the desired station.
   If the switch is held depressed, the reception frequency will change continuously, and stop when the switch is released.
4. **When you wish to receive a different station within the same band, repeat step 3. To receive a station on a different reception band, repeat steps 2 and 3.**
5. **Adjust the volume and tone with the Graphic equalizer controls.**

NOTE:
- *When AUTO TUNING is in use, reception may not be possible when signals are weak. At these times MANUAL TUNING is recommended.*

Memorizing FM and AM stations

You can memorize 8 FM and AM stations in Mode 1, and 8 FM stations in Mode 2, that is a total of 24 stations.

1. **Use the BAND selector switch ⑯ to select either the FM or AM reception band.**
   - For FM broadcasts, the "FM" and "MHz" indicators will light.
   - For AM (MW/SW) broadcasts, the "AM" and "kHz" indicators will light.
2. **Use the TUNING switches ⑲ to tune in the desired station.**
3. **Press the MEMORY switch ⑱.**
   - The MEMORY indicator will light (about 5 seconds.)
   - By pressing the MEMORY switch once, ("P1" indicator lights) the station will be memorized to Mode 1. (1—8)
   - By pressing the MEMORY switch twice, ("P2" indicator lights) the station will be memorized to Mode 2. (9—16)
4. **Press the STATION PRESET switch ⑰.**
   - While the MEMORY indicator is lighting, press the switch corresponding to the station which you wish to memorize or re-memorize.

Memorized station tuning

1. **Press the STATION PRESET switch ⑰ into which the desired station has been memorized.**
   - To listen to a Mode 1 broadcast, press the switch once; and to listen to a Mode 2 broadcast, press it twice.
   - By pressing the STATION PRESET switch, the switch number will be displayed, then the frequency will be displayed.

NOTE:
If, for example, you wish to receive the station memorized in STATION PRESET switch "15" press switch "7/15" twice.

In this way, simple and accurate reception of any desired station is possible.

NOTE:
- *The contents of the STATION PRESET switch will be preserved for several days, even if the MUSIC SYSTEM power cord is unplugged.*
- *If a memorized station has been erased, re-memorize it.*

Last Station Memory

- When the POWER switch ① is pressed to turn power on, the last station received before the power was previously turned STANDBY mode will be received again.
- When power is ON, if the Band selector switch ⑯ is pressed, the last station received before the Band selector switch was previously pressed will be received again.

CASSETTE TAPE SECTION OPERATION

With this cassette tape deck, normal tapes are sufficient for recording and playback.

CASSETTE PLAYBACK (DECK I OR DECK II)

1. **Set the FUNCTION switches ⑳ to TAPE.**
2. **Depress a STOP/EJECT(■/⏏)button ⑤ to open one of the Tape compartments. Then insert a pre-recorded cassette into the tape compartment with the exposed section of the cassette tape facing down. Depress the REW (◄◄) button ⑦ if the tape is not fully rewound onto the left hand hub.**
3. **To advance the tape in forward direction, depress the FF (►►) button ⑥. Depress the STOP/EJECT(■/⏏) button ⑤ to release the FAST FORWARD mode and stop the tape.**
4. **Depress the PLAY (►) button ⑧ and adjust the MASTER VOLUME control ㉒ and Graphic equalizer controls ⑮.**
5. **When the end of the cassette is reached, the mechanism will automatically switch off. If it is desired to stop playback before the end of the tape is reached, depress the STOP/EJECT(■/⏏) button ⑤.**

RELAY PLAY (DECK II→I)

It is possible to automatically play back two cassette tapes in sequence, so that on completion of DECK II, DECK I will automatically start playing. The procedure is as follows:

1. Insert pre-recorded cassettes into both tape compartments, with the first cassette to be played in DECK II and the second cassette to be played in DECK I.
2. Make sure that the FUNCTION switches ⑳ is in the TAPE position.
3. Press the PLAY (►) button ⑧ of DECK II.
4. Press the PAUSE (II) ④ and PLAY (►) buttons ⑧ of DECK I.

NOTE:

- *DECK II will now start playing and stops automatically when the end of the tape is reached and DECK I will start. At the end of DECK I its mechanism will also stop automatically.*
- *During relay play DECK II has priority.*
  After both PLAY (►) buttons ⑧ for DECK I and DECK II have been pressed, for playback on DECK I it is necessary to cancel the play mode of DECK II by pressing its STOP/EJECT (■/⏏) button ⑤. (DECK I does not start playback if the PAUSE(II) button ④ of DECK II is pressed.)

CASSETTE RECORDING (DECK I ONLY)

1. Depress the STOP/EJECT (■/⏏) button ⑤ to open the tape compartment. Then insert a tape into the cassette holder with the exposed portion of the tape facing downwards and the tape fully rewound on the left hand hub.
2. Set the FUNCTION switches ⑳ to the source to be recorded. If recording from the radio, first select the required station as described earlier. Adjust the volume to a suitable listening level (the MASTER VOLUME control ㉒ and Graphic equalizer controls ⑮ settings will not affect the recording in any way.)
3. When ready to record, depress the DECK I REC (●) button ⑩. Recording is now taking place. The REC indicator ㉔ will light to indicate recording.
4. During recording, it may be desired to omit short pieces of the program. This is easily achieved by depressing the DECK I PAUSE (II) button ④ during recording. This will stop the tape travel. Depress the DECK I PAUSE (II) button ④ again to resume the recording.

NOTE:
The pause function should not be activated for longer than a minute or two. For longer interruptions use the STOP/EJECT (■/⏏) button ⑤.

5. When the end of the tape is reached, the cassette mechanism will automatically stop. In order to stop the recording before the end of the tape, simply depress the DECK I STOP/EJECT (■/⏏) button ⑤.

NOTE:
During recording or playback with one of the two decks, do not operate the other.

SYNCHRO COPY (TAPE COPY)

In order to copy from one cassette tape to another follow this procedure:

1. Set the FUNCTION switches ⑳ to TAPE, insert a blank cassette into DECK I compartment and insert the cassette to be copied into DECK II compartment.
2. Press the PAUSE (II) ④ and REC (●) ⑩ buttons of DECK I. Then press the PLAY (►) button ⑧ of DECK II. This will release the PAUSE (II) button ④ of DECK I and start the tape copy.
   When one of the cassette tapes (DECK I or DECK II) reaches its end, the deck will automatically stop. The other deck will continue running either in the recording or playing mode until its tape reaches the end.

NOTE:
You can press the SYNCHRO COPY SPEED switch ② for HIGH speed to make a duplicate of your cassette tape at approximately twice the normal speed. While copying is taking place the unit can still be used to receive from the radio or to play records.

AUXILIARY JACKS (CD/VIDEO)

Your unit has one pair of CD/VIDEO jacks located on the rear panel, to enable the input of signals from other equipment, e.g.: external tape deck, video cassette recorders, compact disc players, etc. (For playback with the external unit the Function switches must be set to CD/VIDEO.) For connection use standard pin plug cords, available at your dealer.

TURNTABLE JACKS (PHONO)

Your unit has one pair of PHONO jacks located on rear panel, to enable the input of signals from a turntable. As turntable please use model PL-Z94 as these models are specifically designed for use with this unit.

NOTE:
Use an MM (moving magnet) cartridge.

MAINTENANCE

CLEANING THE HEAD SECTION

The heads, capstan and pinch roller are parts which are liable to get dirty quite easily. In particular, if the heads are dirty, the high frequency components of the sound will not be reproduced and the stereo balance will be impaired, resulting in a deterioration of sound quality. It is therefore recommended that the head section be cleaned regularly.

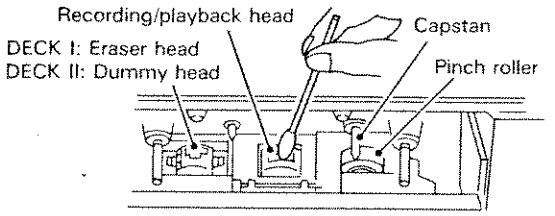
1. Push the STOP/EJECT (■/⏏) button ⑤ to open the tape compartment.
2. Dip a cleaning swab into the cleaning fluid and use it to wipe the heads, capstan, and pinch roller.

DEMAGNETIZING THE HEAD

The recording/playback head becomes magnetized when you use the tape deck for prolonged periods of time. This results in noise being generated and the treble dropping off during recording and playback. The recording/playback head should therefore be demagnetized regularly with a head demagnetizer (sold separately). For further details, refer to the operating instructions accompanying your head demagnetizer.

NOTE:

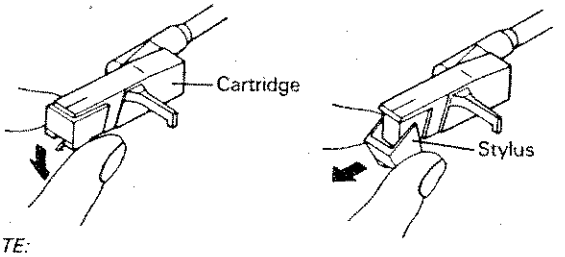
- *Do not hold screwdrivers, metal objects or magnets close to the heads.*
- *When demagnetizing the heads, be sure the unit's POWER switch ① is in the STANDBY position.*



REPLACING THE STYLUS

1. Remove the stylus gently.

2. Attach the new stylus to the cartridge.



NOTE:

- *The service life of the stylus on the supplied cartridge ranges from 800 to 1,000 hours. (After about one year if you play records about two hours everyday. However, the stylus may need to be replaced earlier depending on the way it is used.)*
- *Using a worn or damaged stylus can damage your records and distort the sound reproduction. Remember to replace the stylus at the earliest possible date.*
- *Always use the PIONEER "PN-210" as a replacement stylus.*
- *Always ask for a genuine PIONEER replacement stylus.*

PRECAUTION:

If the turntable is placed directly on or against a speaker, the vibrations from the speaker will be transported to the tonearm's cartridge, thus causing feedback howling. Be sure that speakers are mounted sufficiently separated from the turntable.

MAINTENANCE OF EXTERNAL SURFACES

- Use a polishing cloth or dry cloth to wipe off dust and dirt.
- When the surfaces are very dirty, wipe with a soft cloth dipped in some neutral cleanser diluted five or six times with water and wrung out well, and then wipe again with a dry cloth. Do not use furniture wax or cleaners.
- Never use thinners, benzine, insecticide sprays and other chemicals on or near this unit, since these will corrode the surfaces.

CASSETTE TAPES

Slack or Protruding Tape

If any tape is protruding from the cassette as shown in Fig. A or is slack, the tape may run without passing between the capstan and pinch roller and so may be damaged. Take up any slack by inserting a pencil through the reel hub and turning it as shown in Fig. A. Some tapes have a tape stopper to prevent tape slack.
Make sure it is removed before loading the tape into the deck.

Erasure Prevention Tabs

Cassette tapes are provided with erasure prevention tabs (see Fig. B) which act as a protection device to prevent valuable recordings from being accidentally erased. If these tabs are removed with a screwdriver as shown in Fig. B, you will be able to prevent any erasure of programs even if you accidentally set the tape deck to the recording mode by pushing the REC (●) button ⑩. To re-record a tape which has had its tabs removed, cover the tab opening with a double layer of adhesive tape (see Fig. C).

Tips on using cassette tapes

- Leader tape (which does not allow sound to be recorded over it) is provided at the beginning of a cassette tape. Start recording after allowing the tape to run for approximately 5 seconds so that the leader tape passes the recording head.
- Do not leave a cassette tape exposed to the environment. Store the cassette in its case so that dust and dirt do not adhere to the tape after use, and so that the tape is prevented from becoming slack. Choose a location which is not exposed to the effects of magnetism, dust, dirt and oil for storing the tapes.
- Because C-120 tapes are so thin, they easily jam in the pinch roller and capstan, and they are susceptible to other trouble such as irregular winding. Try not to use them with this unit.

Turn the pencil to remove tape slack.

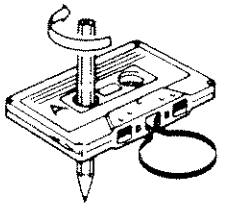


Fig. A

For erasure prevention remove ...

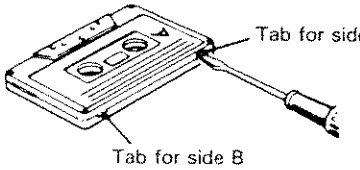


Fig B

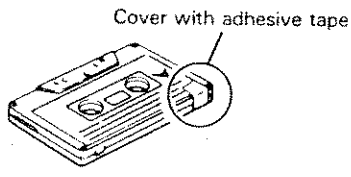


Fig C

HINTS FOR BETTER RECEPTION

EXTERNAL FM ANTENNA

The main advantage of FM over AM is the quality of the broadcast signal. In order to benefit fully from the high signal quality of FM broadcasts, it is recommended that a special-purpose FM antenna be installed. In weak signal areas, a multi-element (3 element, 5 element, 7 element, etc.) antenna should be used.

FM OUTDOOR ANTENNA CONNECTIONS

There are two ways of connecting the FM antenna to the antenna input terminals: with a 300 Ω twin-lead feeder or with a 75 Ω coaxial cable. To get the most from the receiver performance, a 75 Ω coaxial cable is recommended since it is more immune than the twin-lead feeder to noise and interference from external sources. If an FM antenna has already been erected outdoors, connect it, referring to the figure.

GROUNDING

Grounding is recommended if reception of FM programs is impaired by noise. To ground, connect a thick polyvinyl insulated wire to the GND terminal and attach the other end to a metal water pipe or grounding bar or wind it around a copper plate and bury it.

NOTE:
Never connect a wire to a gas pipe for grounding since sparks may ignite the gas.

EXTERNAL SW ANTENNA

If it is not possible to obtain adequate SW reception even by changing the orientation of the separate indoor antenna, or an outdoor antenna should be installed.

INDOOR SW ANTENNA

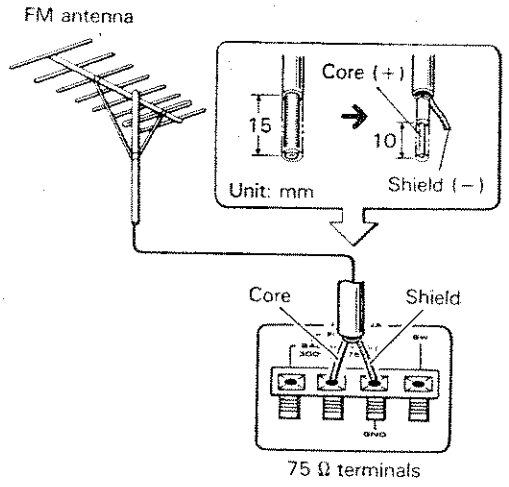
Use a vinyl insulated wire (5 – 6m) and connect one end to the AM antenna terminal and affix the other end to the wall or ceiling, as high as possible.

OUTDOOR SW ANTENNA

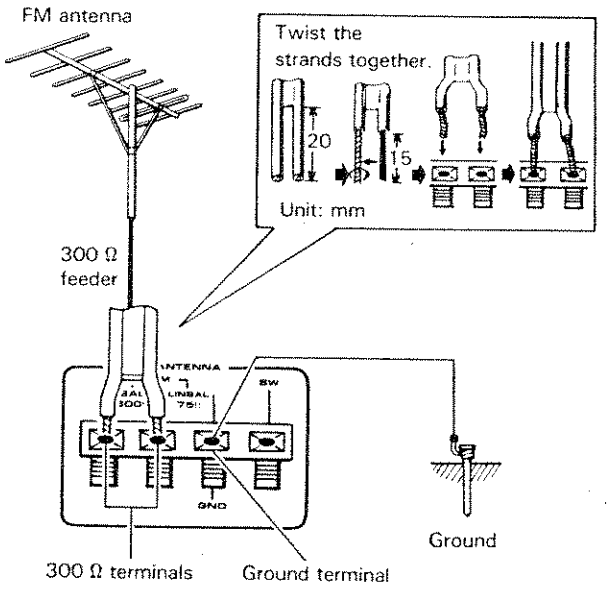
If reception quality is not improved sufficiently even when an indoor antenna is used, a vinyl insulated wire should be installed outside and fixed in place.

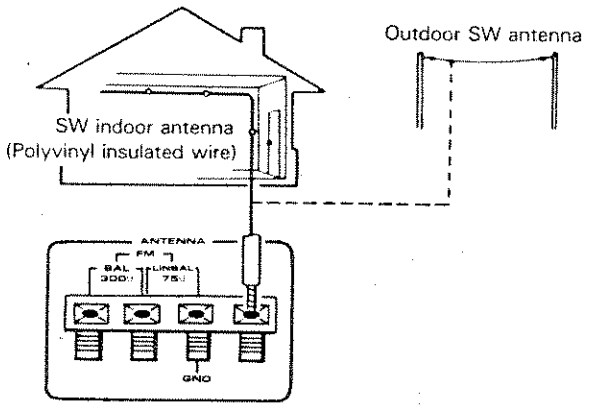
NOTE:
Do not detach the AM loop antenna when using an indoor or an outdoor AM antenna.

Connecting the coaxial cable



Connecting the 300 Ω feeder





TROUBLESHOOTING

Incorrect operations are often mistaken for trouble and malfunctions. If you think that there is something wrong with this component, check the points below. Sometimes the trouble may lie in another component. Investigate the other components and electrical appliances being used.
If the trouble cannot be rectified even after exercising the checks listed below, ask your nearest PIONEER authorized service center or your dealer to carry out repair work.

Amplifier section

Symptom	Probable Cause	Remedy
No sound from speakers.	• Is volume level turned down ? • Are head phones connected to the PHONES jack?	• Increase volume level. • Disconnect the headphones.

Cassette tape deck section

Tape deck will not work.	• Is deck in pause mode? • Is tape loaded correctly?	• Press PAUSE (II) button to release pause mode. • Load correctly.
No sound from tape deck.	• Is FUNCTION switches selected to TAPE? • Is a blank tape loaded? • Are heads clean?	• Set switches to TAPE. • Load a pre-recorded tape. • Clean heads.
Recording not possible.	• Is tape loaded in DECK I? • Are heads clean? • Is a tab on the cassette tape removed?	• Load tape in DECK I for recording. • Clean heads. • Use a cassette tape with tabs, or place a piece of adhesive tape on the back edge (see page 12).
Copying not possible.	• Is a tab on the cassette tape removed?	• Use a cassette tape with tabs, or place a piece of adhesive tape on the back edge (see page 12).
Noise picked up during recording of tape, record, radio, etc.	• Is power to TV set turned on ? • Is unit located too close to TV set?	• Turn off TV set. • Move unit at least from TV set.

Tuner section

No sound.	• Is the band selector switch selected to AM or FM?	• Set switch to AM or FM.
AM reception not possible.	• Is station tuned in properly?	• Tune in station properly.
FM reception not possible.	• Is antenna connected?	• Connect antenna, following instructions on page 13.
Large amount of noise.	• Are radio waves weak, causing antenna input to be insufficient? • Has the connecting cord of the CD player been placed too close to the antenna cable?	• Use external antenna. • Place the cord of the CD player farther away from the antenna cable or turn off the CD player.

Turntable

No sound.	• Is FUNCTION switches selected to PHONO?	• Set switches to PHONO.
Static, scratching noise produced.	• Is record surface dirty? • Is record warped or scratched? • Is stylus clean? • Is stylus worn out?	• Clean record. • Replace record. • Clean stylus. • Replace stylus.

SPECIFICATIONS

Amplifier Section

Peak music power L + R channels ..... 220 W

Music power
1 kHz, T.H.D. 10 %, 4 Ω ..... 55 W + 55 W
Effective maximum output
1 kHz, T.H.D. 10 %, 4 Ω (EIAJ) ..... 22 W + 22 W
Frequency response
PHONO MM ..... 60 Hz to 20,000 Hz (± 3 dB)
CD/VIDEO ..... 60 Hz to 20,000 Hz (± 3 dB)
Hum and Noise (IHF, short circuited, A network)
PHONO MM ..... 60 dB
CD/VIDEO ..... 70 dB
Graphic Equalizer frequency band
..... 100 Hz, 330 Hz, 1 kHz, 3.3 kHz, 10 kHz, ± 8 dB

FM Tuner Section

Frequency range ..... 87.9 MHz to 107.9 MHz (100 kHz step)
87.5 MHz to 108 MHz (50 kHz step)
Usable Sensitivity ..... 26 dBf, IHF (5.6 μV/75 Ω)
Distortion
STEREO ..... 1 % (1 kHz)
Signal-to-Noise Ratio (IHF, 60 dBf Input) ..... Mono: 60 dB
Stereo Separation ..... 26 dB (1 kHz)
Antenna Input ..... 75 Ω unbalanced
300 Ω balanced

AM Tuner Section (MW)

Frequency range ..... 531 kHz to 1,602 kHz (9 kHz step)
530 kHz to 1,610 kHz (10 kHz step)
Sensitivity (Ferrite-bar antenna) ..... 800 μV/m
Antenna ..... Ferrite-bar Antenna

AM Tuner Section (SW)

Frequency range
SW1 ..... 3200 kHz to 7300 kHz (5 kHz step)
SW2 ..... 9500 kHz to 21750 kHz (5 kHz step)
Antenna ..... lead wire antenna

Tape Deck Section

Systems ..... 4 track, 2-channel stereo
Heads ..... Recording/playback head x 1 (DECK I)
Erasing head x 1 (DECK I)
Playback head x 1 (DECK II)
Wow and Flutter ..... No more than 0.2 % (WRMS)
Fast Winding Time ..... Approximately 150 seconds
(C-60 tape)
Frequency Response (– 20 dB recording):
Normal tape ..... 63 Hz to 8,000 Hz ± 6 dB
Signal-to-Noise ratio ..... 40 dB

Furnished Parts

FM T-type Antenna 1
Lead wire antenna 1
Remote control unit 1
Dry cell batteries, Size "AAA" (IEC R03/UM-4) 1.5 V 2
Operating Instructions 1

Miscellaneous

Power requirements .. AC 110/120–127/220/240 Volts, 50/60 Hz
Power Consumption ..... 115 W
Dimensions ..... 360 (W) x 292 (H) x 330 (D) mm
14-3/16 (W) x 11-1/2 (H) x 13 (D) in
Weight (without package) ..... 7.5 kg (16 lb 9 oz)

Speaker Section

System ..... 3-way 3-speaker system
Loudspeakers:
Woofer ..... 16 cm cone type
Mid range ..... 6 cm cone type
Tweeter ..... 2.7 cm piezo type
Nominal Impedance ..... 4 Ω
Maximum input power ..... 30 W
Dimensions (without package) ... 271 (W) x 477 (H) x 185 (D) mm
10-11/16 (W) x 18-3/4 (H) x 7-5/16 (D) in
Weight (without package) 1 set ..... 10 kg (22 lb)

Turntable: PL-Z94 (Optional)

Motor, Platter

Motor Type ..... DC servo motor
Drive Method ..... belt drive
Speed ..... 33-1/3, 45 RPM
Wow and flutter ..... 0.07 % WRMS (JIS) ± 0.10 % WTD Peak (DIN)
S/N ..... 63 dB (DIN-B)
Platter ..... 295 mm dia., aluminum die-cast

Tonearm

Type ..... Dynamic balance type, straight tonearm

Installed Cartridge

Type ..... MM Type
Stylus ..... 0.6 mil diamond
Replacement Stylus PN-210
Output voltage ..... 2.5 mV (1 kHz, 5 cm/s, Lat. peak)
Tracking Force ..... 2.0 – 3.0 g (optimum 2.5 g)
Frequency Response ..... 20 Hz to 25,000 Hz
Load Resistance ..... 47 kΩ
Cartridge Weight ..... 4 g

Other

Dimensions ..... 360 (W) x 90 (H) x 359.5 (D) mm
14-3/16 (W) x 3-9/16 (H) x 14-1/8 (D) in
Weight
PL-Z94 ..... 2.7 kg (5 lb 15 oz)

Accessories

EP Adaptor 1

NOTE:
Specifications and design subject to possible modification without notice due to improvement.